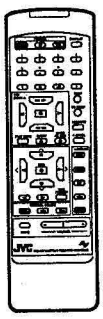
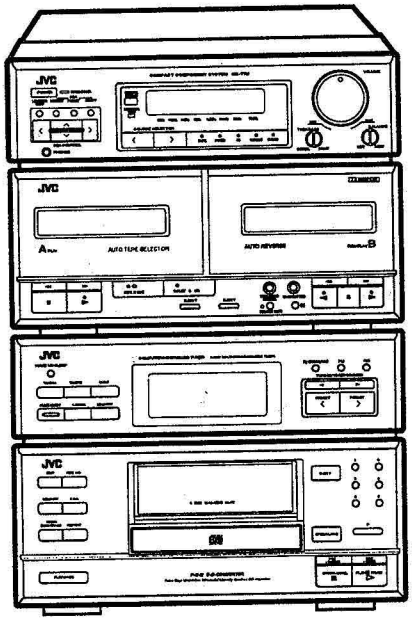
JVC

USER MANUAL

CA-MX77MTN





COMPACT disc DIGITAL AUDIO

For the explanation of ICs, the disassembly and the adjustment procedures, we issued the following service manuals.
Please use the manuals with this one when servicing.

Component

Compact component (CA-MX77MTN) is a unit composing of the following units.

Model No.	Unit No.	Service Manual No.
CA-MX77MTN	DX-MX77MTN (Amplifier/Deck)	20335
	XT-MX77MTN (CD/Tuner)	20336

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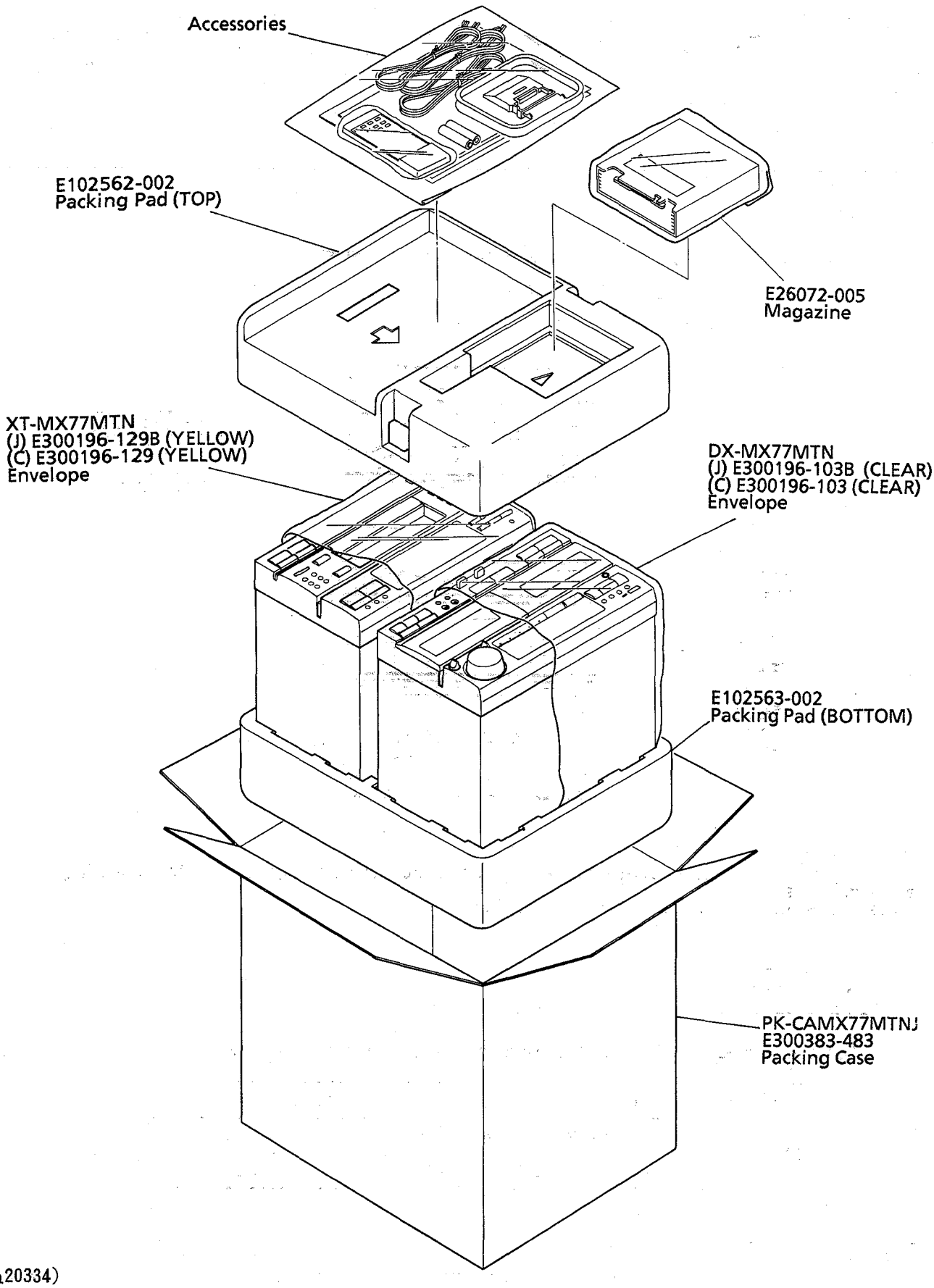
No. 20334
Mar. 1992

Packing Materials and Part Numbers

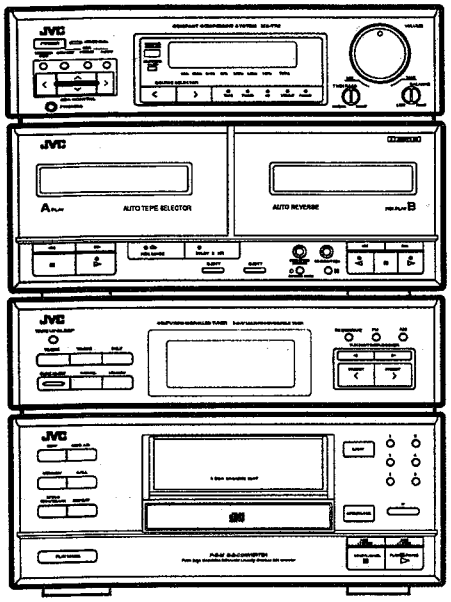


■ Accessories

⚠	Part Number	Part Name	Q'ty	Description	Areas
	E30580-1843A	Instruction Book	1		J
	E30580-1844A	Instruction Book	1		C
	E66416-003	Envelope	1		J
	BT-20047F	Warranty Card	1		J
	BT-20108A	Service Information	1		J
	QPGA020-02505	Envelope	1		C
	BT-20025K	Warranty Card	1		C
	QPGA025-03505	Envelope	1		C
	QPGA025-03505B	Envelope	1		J
	BT-20044G	Safety Information Sheet	1		J
	BT20071A	SVC Center List	1		C
	EWP101-008	Speaker Cord	2		
	EWP502-005K	Built in Antenna	1		
	EQB4001-015	AM Loop Antenna	1		
	RM-SEMX77MU	Remote Control Unit	1		
	R03BPA-2STSA	Battery	1		
	E43486-410B	Caution Sheet	1		

The Marks Designated Areas

J ..... the U.S.A.
C ..... Canada
No marks indicates all areas.



Thank you for purchasing thus JVC Compact Component Stereo System. We hope it will be valued addition to your home, giving you years of enjoyment.

Be sure to read this instruction manual carefully before operating your new stereo system. Here you will find all the information you need to set up and use the system.

For questions that cannot be answered in the manual, please contact your dealer.

IMPORTANT CAUTIONS

1. **Installation of the unit**
- Select a place which is level, dry and neither too hot nor too cold (between 5°C and 35°C).
- Leave sufficient distance between it and your TV.
- Do not use it in a place subject to vibrations.

2. **Power cord**
- Do not handle the power cord with wet hands!
- When unplugging from the wall outlet, always pull the plug, not the power cord.

3. **Malfunctions, etc.**
- There are no user serviceable parts inside. If anything goes wrong, unplug the power cord and consult your dealer.
- Do not insert any metallic object into the receiver.

About This manual

This instruction manual will help you with the following:
- Connecting the components of the system, installing the antennas, and connecting other components such as a turntable or VCR to the system.
- Learning the operations of the components of the system (Amplifier, CD Player, Tape Deck, Tuner and the Remote Controller).
- Learning additional functions of the system, such as using the timers, using the SEA graphic equalizer, presetting broadcast stations in memory, and using the various recording capabilities.
- Trouble-shooting, if a problem should occur.

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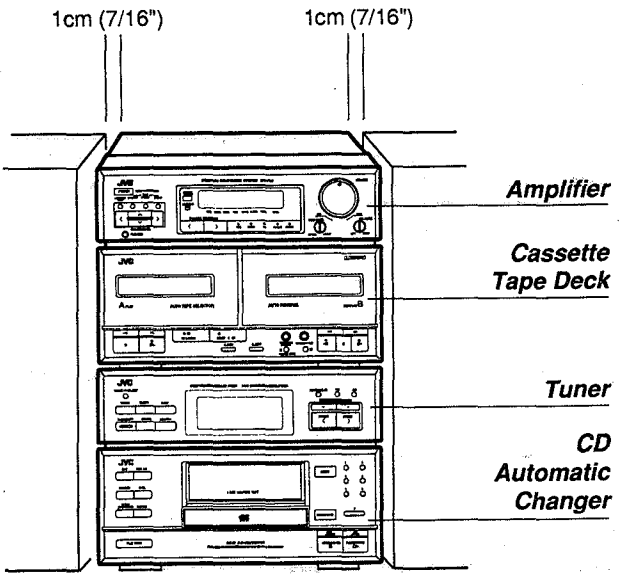
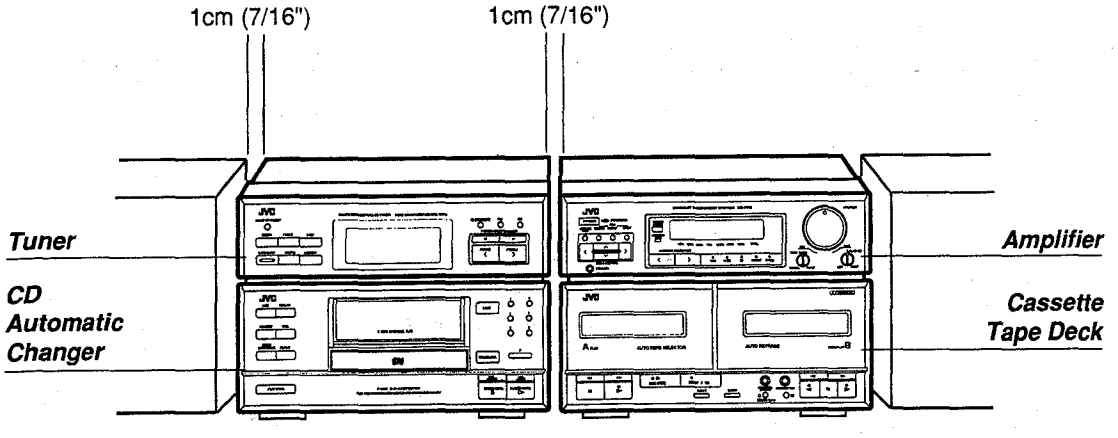
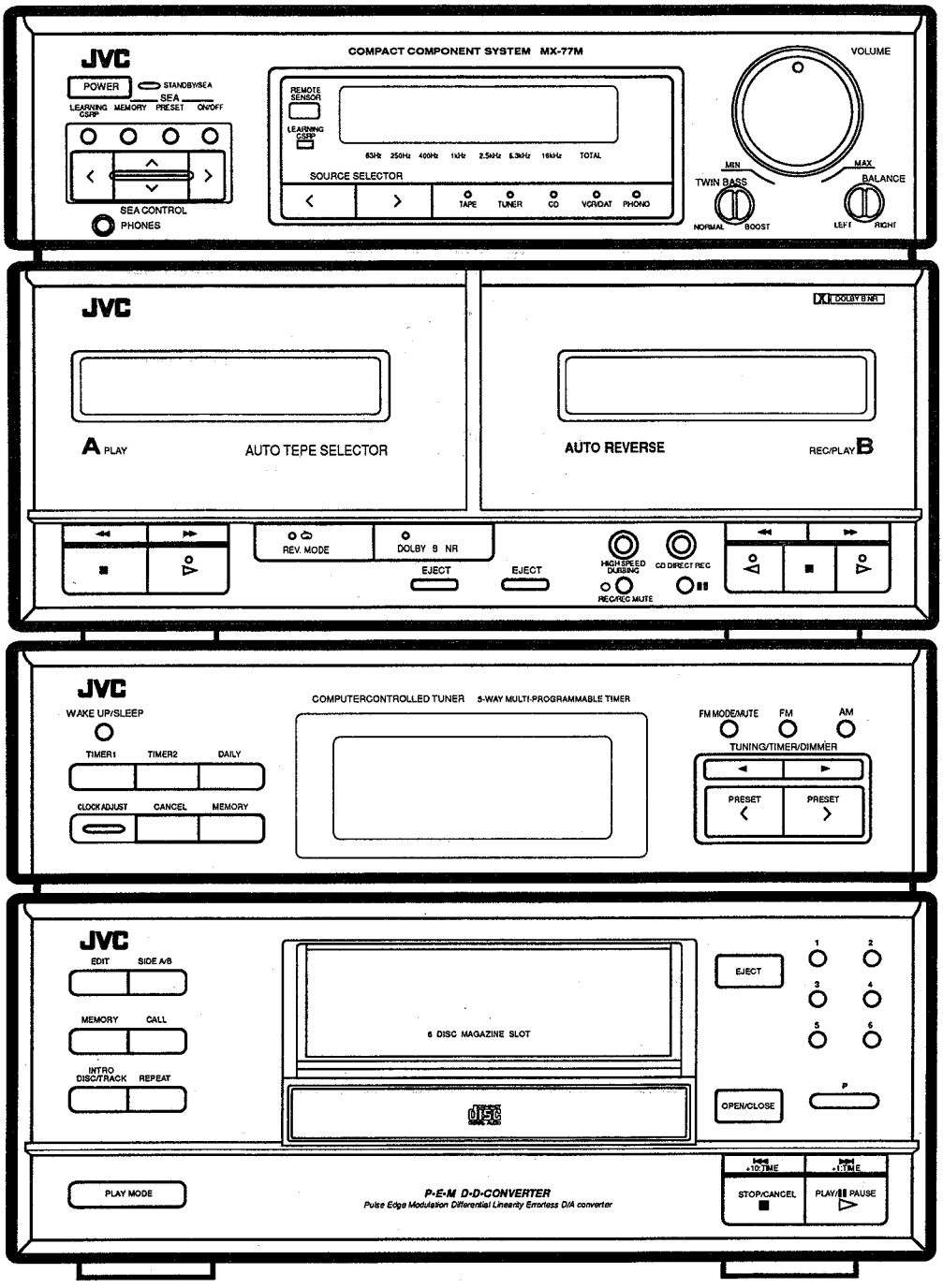
Laying Out the System

There are two ways to lay out the system as shown above:

- Leave a space of at least one cm on both sides of the amplifier and keep the back at least 10 cm from the wall for ventilation.
- If the system does not work well or needs repairing, please take all the components with you to the nearest agent.







Amplifier

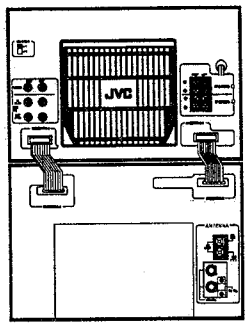
Cassette Tape Deck

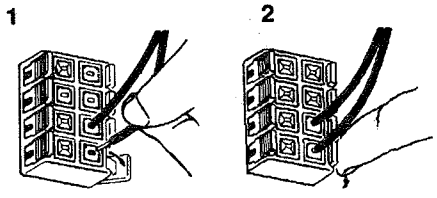
Tuner

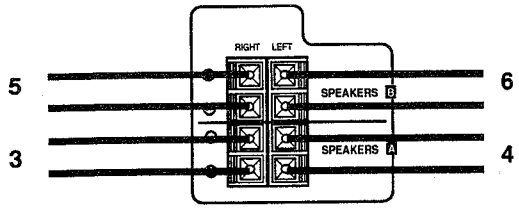
CD Automatic Changer

Getting Started

Connecting the System Components







Connection Notes

- Besore you plug ing the system, you must make all the necessary connections.

Connecting the Two stereo Components

- Connect the Amplifier/Tape Deck component and the Tuner/CD Automatic Changer component.

Connect the two ribbon cables (CONNECTOR A and B) from Tuner/CD Automatic Changer component to the Amplifier/Tape Deck component.

Connecting The Speakers

Speaker Terminals
Connect the speakers to the Amplifier/Tape Deck components as follows:

1. **When connecting speakers, open each terminal and insert the end of the speaker wire as shown.**
2. **Close the terminals as shown to clamp the speaker wires in place.**

SPEAKERS A
Connect the Full Range Speakers to the SPEAKERS A terminal on the Amplifier/Tape Deck as follows.

3. **Connect the gray (+) and blue (–) terminals of the right-side Full Range Speaker to the lower gray (+) and blue (–) terminals marked RIGHT on the Amplifier/Tape Deck.**
4. **Connect the gray (+) and blue (–) terminals of the left-side Full Range Speaker to the lower gray (+) and blue (–) terminals marked LEFT on the Amplifier/Tape Deck.**

SPEAKERS B
Connect the Subwoofers to the SPEAKER B terminal on the amplifier as follows.

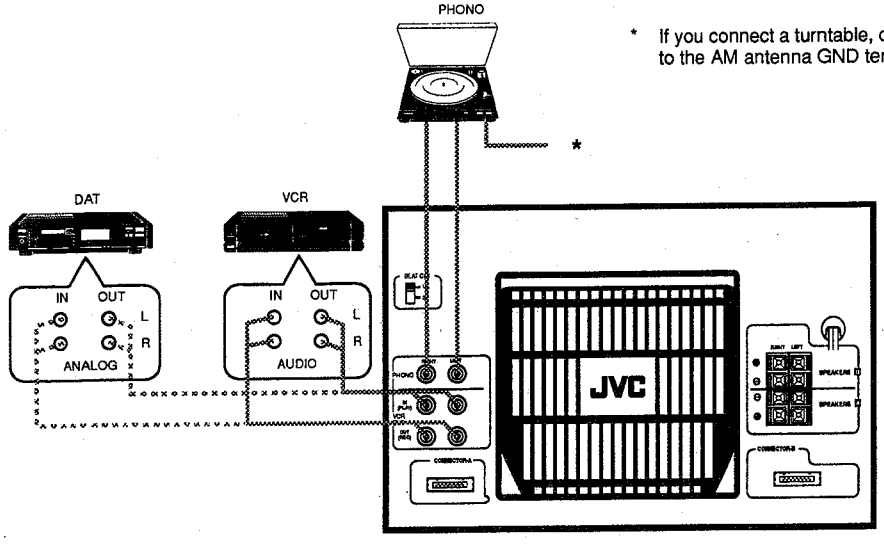
5. **Connect the red (+) and black (–) terminals of the right-side Subwoofer to the upper red (+) and black (–) terminals marked RIGHT on the amplifier.**
6. **Connect the red (+) and black (–) terminals of the left-side Subwoofer to the upper red (+) and black (–) terminals marked LEFT on the Amplifier/Tape Deck.**

- Using speakers with the correct impedance. The correct impedance is indicated on the rear panel.

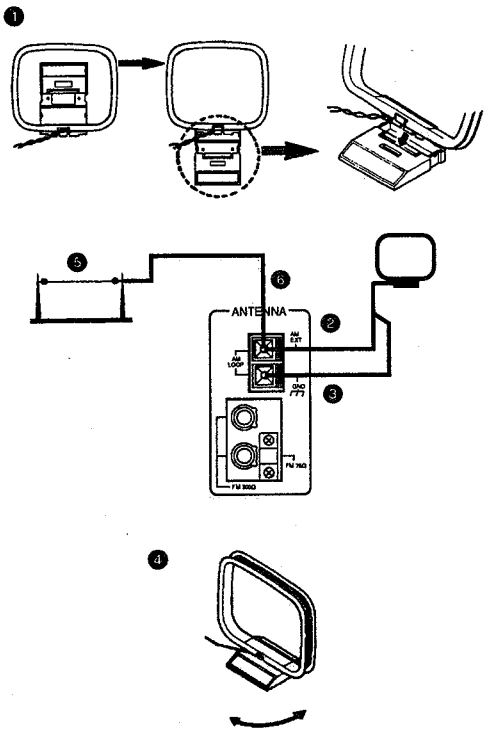
Connecting Other Components

The amplifier can also be connected to a Turntable (PHONO), a Video Cassette Recorder (VCR) and a Digital Audio Tape (DAT) Deck.

* If you connect a turntable, connect the ground wire from the turntable to the AM antenna GND terminal.



/AM Antenna Connections



AM Loop Antenna

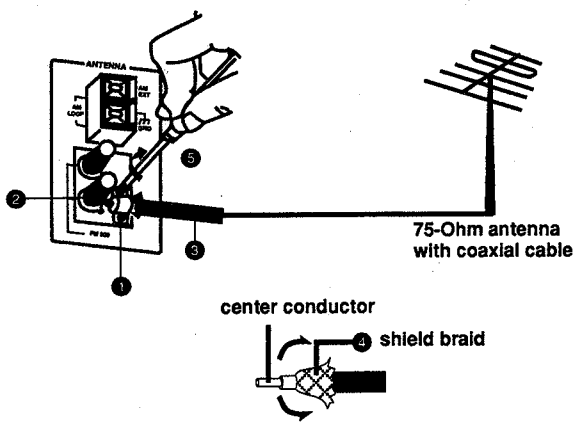
1. **Fold out the loop from the antenna base.**
2. **Connect one antenna wire to one of the AM LOOP terminals.**
3. **Connect the remaining antenna wire to the other AM LOOP terminal.**
   Note: These two terminals open and close the same way as the speaker terminals.
4. **Adjust the loop antenna as needed to get the best reception.**

AM Outdoor Antenna

If your AM broadcast reception is unsatisfactory, you should connect an AM outdoor antenna in addition to the loop antenna.
Important! The AM loop antenna must be installed to receive AM broadcasts. Do not disconnect the loop antenna when installing an outdoor antenna.

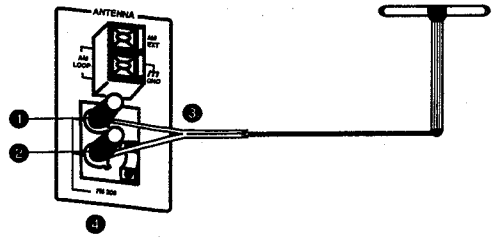
5. **Install a single vinyl-covered antenna wire outdoors. The antenna wire should be about 16 to 40 feet (5 to 12 meters) long.**
6. **Connect one end of the antenna to the AM loop terminal marked AM EXT.**
   Note: Except for the connection, make sure that no uninsulated antenna wire touches the rear panel. Otherwise, you might not receive AM broadcasts.

FM Antenna Connections



FM 75-Ohm Antenna Cable

1. **Loosen the screws holding the bracket.**
2. **Loosen the cap of the 300/75-ohm terminal.**
3. **Insert the round antenna cable through the bracket from below.**
4. **Make sure that the shield braid on the cable contacts the 300/75-ohm terminal.**
5. **Tighten the bracket screws and the cap on the 300/75-ohm terminal.**



FM 300-Ohm Antenna Cable

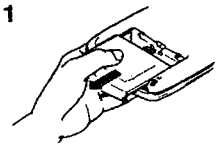
6. **Loosen the cap on the 300/75-ohm terminal.**
7. **Loosen the cap on the 300-ohm terminal.**
8. **Connect the two conductors of the antenna cable to the 300/75-ohm terminal and the 300-ohm terminal.**
9. **Tighten the caps on both terminals.**
   Note: Whether you use the 75-ohm or 300-ohm cable, make sure the antenna conductors do not touch any other terminals on the rear panel. This could cause poor reception.

Note:

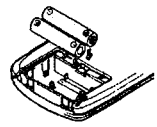
- Make sure the antenna conductors do not touch any other terminals, connecting cords and power cord on the system.
  This could cause poor reception.

Installing Batteries in the Remote Controller

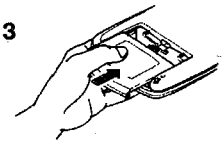
1



2



3



1. **Remove the battery compartment lid.**
   Press the lid and slide it in the direction of the arrow.

2. **Insert the batteries.**
   Use two UM-4/AAA/R03 size batteries.
   Make sure the + and – polarities on the batteries and compartment are the same.

3. **Attach the lid.**
   Press the lid and slide it in the direction of the arrow.

Note:

- Batteries installed incorrectly may burst of leak. Pay attention to the following:
  - When the Remote Controller is not in use for a long period of time, remove the batteries.
  - Do not mix old and new batteries.
  - Do no mix batteries of different types, even if their shapes are the same.
  - When batteries become weak, the operating distance of the Remote Controller is greatly reduced and you will need to replace the batteries.

AC power connection

Caution: To prevent electric shock, turn all stereo components off before you install or remove power cords.

Important! Before you plug the power cord into an outlet, make sure that all stereo components are connected correctly.

Using the Amplifier

Using the Power Switch

1. **Press the POWER switch to turn on the stereo system.**
   When the POWER switch is not pressed and the power cord is plugged in, the stereo is in STANDBY mode and STANDBY/SEA indicator lights. In STANDBY mode, the stereo uses a small amount of power (12 watts) for the clock, memory contents, and any timers which are set.
2. **To disconnect power completely, unplug the power cord.**

Adjusting the Volume controls

Volume
Turn the VOLUME knob to adjust the volume level of the speakers or headphones.

- Connect headphones to the PHONES jack on the amplifier for listening through headphones. No sound will be produced from the speakers.

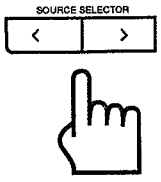
Important! There is danger of your hearing being affected if you listen to your sound system at an excessively high volume level. You must be especially aware of this danger when using headphones.

Balance
Turn the BALANCE knob to adjust the left-and-right sound balance in the speakers or headphones.

Twin Bass
Turn the TWIN BASS knob to adjust the output level of the Subwoofers. Turning this control toward BOOST will boost the low frequencies.

Selecting the Source

Select the SOURCE you want to listen to with SOURCE SELECTOR button.



- Each time you press the SOURCE SELECTOR button, the source changes to the next one in the sequence, and the corresponding SOURCE indicator lights.

  ↔ TAPE ↔ TUNER ↔ CD ↔ VCR/DAT ↔ PHONO ↔

Using Turntable, VCR and DAT

In addition to the CD Automatic Changer, Tuner, and Cassette Tape Deck, the amplifier can also play a turntable, a VCR and a DAT.

1. **Turn the power for each piece of component ON.**
2. **To play a record, press the SOURCE SELECTOR button on the amplifier so that PHONO lights on the SOURCE indicator.**
   To use VCR or DAT, press the SOURCE SELECTOR button on the amplifier so that VCR/DAT lights on the SOURCE indicator.
3. **To operate the each component, refer to its instruction manual.**

- You can operate a JVC VCR using the remote controller.

When VCR is connected, the sound is heard through the speakers.

Using the SEA Function

You can think of the SEA function as an enhanced version of the conventional Bass and Treble knobs on most sound systems. Use it to alter the tone of the source (for example, CD, tape, or broadcast) by increasing or decreasing the levels of selected frequency ranges.

The total frequency range that the amplifier can reproduce (from the lowest-pitched sounds to the highest) is divided into seven sections: 63Hz, 160Hz, 400Hz, 1kHz, 2.5kHz, 6.3kHz, and 16kHz.

By making certain frequency ranges louder or softer, you can change the sound to suit your taste. You can also choose from six pre-programmed SEA settings.

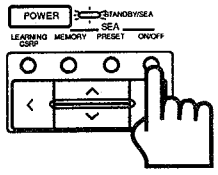
Using an SEA Pattern

You can use the SEA pattern you created, or one of the six pre-programmed SEA patterns, each of which has its own sound characteristics.

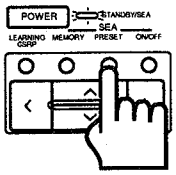
The pre-programmed SEA patterns are:

A (Rock)	Boosted low and high frequencies.
B (Jazz)	Gives a feeling of a live atomosphere. Good for acoustic music.
C (Pops)	Good for vocal music.
D (Classic)	Set for wide and dynamic sound stereo systems.
E (H.Phone)	When creating tapes for headphone use.
F (Car)	When creating tapes for use in a car stereo.

1. **Press the SEA ON/OFF button on the Amplifier.**
   The SEA indicator lights.



2. **Press the SEA PRESET button to select a SEA Pattern.**

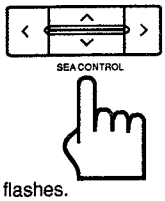


Each press of the SEA PRESET button changes the pattern displayed in the following order:

P (Pre-Programmed SEA pattern) A → B → C → D → E → F →
M (your pattern) A → B → C → D → E → F → (back to the beginning)

Controlling Sound with the SEA Function

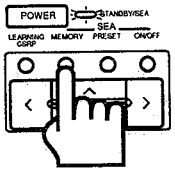
1. **Press the SEA ON/OFF button on the Amplifier.**
   The SEA indicator lights.
2. **Select a preset pattern.**
3. **Press the SEA CONTROL button.**



The frequency point flashes.
Make a setting while it is flashing.

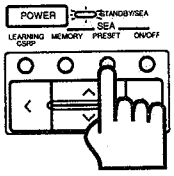
4. **Select the frequency band to be adjusted.**
   Using the SEA CONTROL button ‹ or ›.
5. **Adjust the level.**
   Using the SEA CONTROL button ^ or v.
6. **Repeat steps 3-4 for each frequency range.**
   Make a setting while it is flashing.

7. **Press the MEMORY button.**



A to F flash.

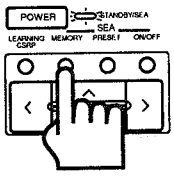
8. **Press the PRESET button and select anyone from A through F.**



Each time you press the PRESET button, the pattern will change in the following order:

A → B → C → D → E → F → (back to the beginning)

9. **Press the MEMORY button.**



- Six patterns, A to F can be memorized.
- To recall a memoried pattern, select M(A-F) with the SEA PRESET button.

Changing the SEA Display

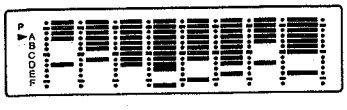
Five display modes (PEAK HOLD, PEAK LINE, SHOWER, MOUTH, EQUALIZING PATTERN) are available. Each time you press the Remote Controller DISPLAY button, the display mode will change in the following order:

→ PEAK HOLD → PEAK LINE → REVERSE → EQUALIZING PATTERN → (back to the beginning)

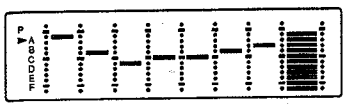
PEAK HOLD

PEAK LINE

REVRESE



EQUALIZING PATTERN



Using the LEARNING CSRP Feature

The LEARNING CSRP (Compu-link Source Related Preset system) is the state-of art electronic feature that learns VOLUME and other control settings on each source. This was previously done automatically each time a difference source was played back or each time the system was turned off. It remembers the last five settings of each parameter you has set and automatically recalls the most frequently used ones.

This feature lets you invoke your favorite control settings by simply selecting a source (TAPE, TUNER, CD, VCR/DAT, PHONO) without repeating many settings each time sources are changed.

When the LEARNING CSRP button is set to ON, the following parameters are learned each time a difference source was played back or the system was turned off. In addition, the parameters are learned y time band. Time band that are automatically set are AM6:00, PM12:00, PM6:00 and AM12:00.

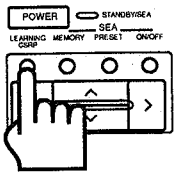
- Volume level
- SEA settings (Preset Pattern and display mode)

They will be set based on the last five settings.

- SEA ON/OFF

They will be set the last setting.

Press the LEARNING CSRP button



The indicator light will go on.

- When sources are switched, the VOLUME level, and SEA are automatically set.
- When turning the POWER off, the VOLUME control automatically turns toward MIN.
- When turning the POWER on again, the VOLUME control automatically turns up to the position set by the LEARNING CSRP function.

Using the Loudness Function

The loudness function will makes up for loss of the human auditory sensation when the sound is low.

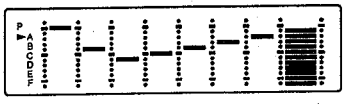
1. **Turn the SEA ON.**

2. **Press the SEA PRESET button and select P(A-F).**

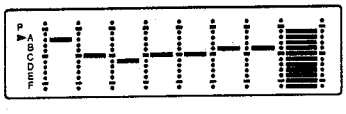
Note:
- M(A-F) does not have the Loudness Function effect.

3. **Press the LEARNING CSRP button.**
The indicator light will go on.

- If the volume level is lowered:
Low and high frequencies are boosted to make the sound powerful and distinct.



- If the volume level is raised:
The SEA setting becomes similar to the preset pattern and the sound becomes natural.

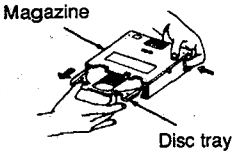


Using the CD Automatic Changer

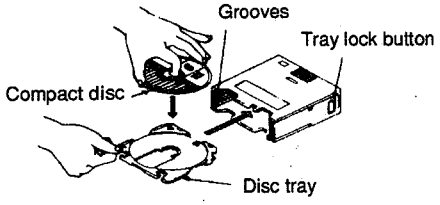
Installing the discs in the magazine

How to install the discs

1. **The discs trays in the magazine are removable.**
   Slide the disc tray out while simultaneously the tray lock button.



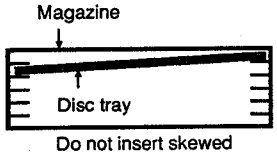
2. **Locate a disc on the disc tray with its label side up.**



3. **Line up the disc tray with the grooves in the magazine and push the disc tray right in.**
   It is unnecessary to press the tray-lock button when inserting the disc tray.

- If you wish to use 8 cm (3") CDs, please obtain the special magazine (XC-M73), designed for these.

Please note:
- Never bend the disc tray or force it into the magazine.
  A disc tray inserted skewed may cause a malfunction.



- The openings in the disc trays are for the passage of the laser signal. These openings leave a part of the shiny surface of the disc exposed. Please take care not to touch this shiny surface.
- It is not possible to play from the disc if it is located upside-down.
- Never place a disc directly in the magazine without using the disc tray.

Preliminary Operation

Up to seven discs can be played by using both the SINGLE PLAY TRAY and magazine.

Insert the magazine, discs installed in, in the MAGAZINE SLOT.
Push it gently until it clicks in place.

Install a disc on the SINGLE PLAY TRAY.

1. **Press the OPEN/CLOSE button on the CD Automatic Changer.**
   The SINGLE PLAY TRAY slides out.

2. **Place a CD (with a label facing up) in the tray, and press the OPEN/CLOSE button again.**
   The tray slides back in.

3. **Press the CD Automatic Changer PLAY/PAUSE button, or select CD with the amplifier SOURCE SELECTOR.**
   The CD Automatic Changer plays the CD on the single play tray with the first track.

The single play tray is indicated by P on the display. For the order in the magazine, the bottom disc tray is Disc No. 1, the disc tray above it is Disc No. 2, and the top disc tray is Disc No. 6.

To Stop Play

Press the STOP/CANCEL button on the CD Automatic Changer or Stop button on the Remote Controller.

Ejecting the MAGAZINE

Press the EJECT button on the CD Automatic Changer or on the Remote Controller.

Ejecting the CD

1. **Press the OPEN/CLOSE button, and take the CD out of the tray.**

2. **Press the OPEN/CLOSE button again to close the tray.**

Continuous Play

In CONTINUOUS mode, you may play any of the selection of any disc, to the final track on the DISC No. 6, continuously.

Press the PLAY MODE button and select the CONTINUOUS mode.
The CONTINUE indicator lights.

- When the power is switched on, control enters the CONTINUOUS mode.

Note:
- When you press the PLAY MODE button and change the mode, set the CD Automatic Changer to the Stop mode. You cannot change the mode during playing.

To Play from the First Selection

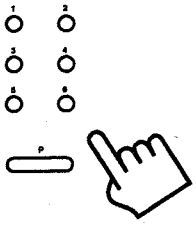
Press the PLAY/PAUSE button on the CD Automatic Changer.

The discs are played in order from the first track on the single play tray to the last track on Disc No. 6.

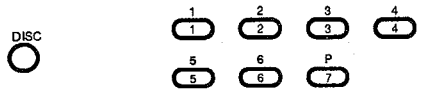
- If the single play tray is open, it will close automatically and playback will begin.
- If there is no CD on the disc tray or there is no disc tray, the CD on the next disc tray is played.

Selecting a Disc to Play

1. **Select the disc desired with the DISC button on the CD Automatic Changer.**



If you use the Remote Controller, press the DISC button, and specify the Disc No. with numeric keys 1 to 6 and P.



- The discs are played in order from the first track on the CD with the selected disc No. to the last track on Disc No. 6.

Notes:
- If there is no CD on the disc tray or the disc No. with disc tray specified, the CD on the next disc tray will be played.
- The disc No. indicators go off if there is no CD on the disc tray and there is no disc tray. You cannot select any disc No. if the corresponding indicator is off.

Selecting a Track to Play

Use the ⏮ -10 TIME | +1 TIME ⏭ button.

Scanning through track numbers (AUTO SEARCH)

Each time the ⏮ -10 TIME button is pressed, the track moves backward by one number.
Each time the +1 TIME ⏭ button is pressed, the track moves forward by one number.

- If you press the ⏮ -10 TIME or +1 TIME ⏭ button continuously while the CD Automatic Changer is in the stop mode, the track number will continue to move in the selected direction.
- If you press the ⏮ -10 TIME or +1 TIME ⏭ buttons while the CD Automatic Changer is in the pause mode, you will find the original track you selected. You can restart playback by pressing the PLAY/PAUSE button.

Searching for a specific part of a track (MANUAL SEARCH)

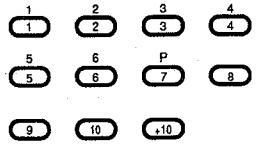
If you hold down the ⏮ -10 TIME button while the CD Automatic Changer is playing or has paused, fast rewinding will occur.
If you hold down the +1 TIME ⏭ button while the CD Automatic Changer is playing or has paused, fast forwarding will occur.

Notes:
- When the track number selected on a certain disc does not exist, play starts from the final selection on that disc.
- If there is no CD on the disc tray or you specify a track with the disc No. without a disc tray, the display Disc No. indicator will go off, and the CD on the next disc tray will be played.

Using the Remote Controller to Select a Track

There are two ways to search for a track with the remote cotroller:

Numeric keypad



AUTO SEARCH buttons ◀◀ ⏮ or ⏭ ▶▶

Using the Numeric Keypad

1. **Press the CD 10KEY button on the Remote Controller.**

2. **Enter the track's number with the numeric keys.**
- If the track you want to hear is the 8th track. press the 8 key.
- If the track you want to hear is the 15th track, press the +10 key and the 5 key.
- If the track you want to hear is the 20th track, press the +10 key and the 10 key.

Using the Auto Search Buttons

Press the Auto Search ◀◀ ⏮ or ⏭ ▶▶ button on the Remote Controller to scan through the track numbers.

Note:
- You cannot search manualy by holding down the ◀◀ ⏮ or ⏭ ▶▶ button on the Remote Controller.

Listening Repeatedly

Using the REPEAT button.

Each time you press the REPEAT button, the mode will change in the following order:

→ **REPEAT** → **REPEAT 1** → **OFF**→ (back to the beginning)

REPEAT
If all discs in the CD Automatic Changer and the last track are played, playing will be repeated from the first disc.
It will keep repeating until you cancel the repetition.

- If you select the REPEAT mode in the PROGRAM mode, all the programmed tracks will be played, and they will be repeated in the order programmed.

REPEAT 1
The current track will play to the end and then start over again. It will keep repeating until you cancel the repetition.

- If you select the REPEAT 1 mode in the PROGRAM mode, the selected track will be played repeatedly.

Cancelling Repetition
Press the REPEAT button and turn the REPEAT indicator off.
Each track will play till the end without repeating.

INTRO play

This function is useful to search for a disc or track in the CD Automatic Changer.

1. **Press the STOP/CANCEL button on the CD Automatic Changer or Stop button on the Remote controller.**

2. **Press the PLAY MODE button on the CD Automatic Changer or Remote Controller, and select the CONTINUOUS mode.**
The CONTINUE indicator lights.

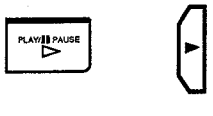
3. **Press the CD Automatic Changer INTRO button and select the desired mode.**
Each time you press the INTRO button, the mode changes in the following order:

→ **DISC INTRO** → **INTRO** → **OFF**→ (back to the beginning)

DISC INTRO mode
Play the first track of each of the discs in the CD Automatic Changer from the disc on the single play tray to Disc No. 6, for 15 seconds.

INTRO mode
Play the beginning of each track of the discs in the CD Automatic Changer from the disc on the single play tray to Disc No. 6, for 15 seconds.

4. **Press the PLAY/PAUSE button on the CD Automatic Changer or Play button on the Remote Controller.**



- Each track will be played for 15 seconds in the mode you selected.

Notes:

- When you press the ⏮ or ⏭ button in the INTRO mode, this mode will be canceled, and tracks will be played as follows.
  If you press the ⏮ button, the currently selected track will be played from the beginning in the CONTINUOUS mode.
  If you press the ⏭ button, the track following the currently selected track is played in the CONTINUOUS mode.
  If you hold down the ⏮ or ⏭ button, the manual search function will be available, and you can have fast-rewind or fast-forward.
- If you press the Disc button on the CD Automatic Changer in the INTRO mode, or if you press the DISC button on the Remote Controller, then select a disc with numeric keys. This will cancel the INTRO mode, and tracks will be played in the CONTINUE mode, starting from the first track of the disc.
- If you press the CD 10KEY button on the Remote Controller, select a disc with numeric keys while playing in the INTRO mode, the INTRO mode will be canceled, and tracks will be played in the CONTINUE mode from that track.

To cancel the INTRO play

1. **Press the STOP/CANCEL button on the CD Automatic Changer or the Stop button on the Remote Controller.**

2. **Press the INTRO button and turn the indicator off.**

Note:

- If you press the STOP/CLEAR button on the CD Automatic Changer or the Stop button on the Remote Controller, and press the PLAY MODE button, the INTRO mode will be canceled, and the CONTINUOUS mode will change to the PROGRAM mode.

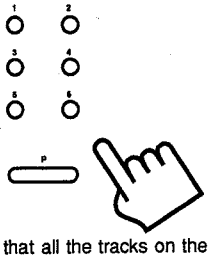
Programmed Play

In PROGRAM mode 32 steps can be programmed to play in any desired order from the 7 discs loaded into the magazine and single play tray.

Press the PLAY MODE button and select the PROGRAM mode.
The PROGRAM indicator lights.

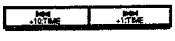
Operate the CD Automatic Changer

1. **Press the STOP/CANCEL button.**
   This puts the CD Automatic Changer in STOP mode.
2. **Press the PLAY MODE button on the CD Automatic Changer and select the PROGRAM mode.**
   The PROGRAM indicator lights.
3. **Press the DISC button and select a disc.**
   The AL indicator flashes on the display.



- The AL indicator shows that all the tracks on the selected disc have been selected. If you press the MEMORY button while the AL indicator is flashing, all the tracks on the disc are programmed.

4. **Press the ⏮ or ⏭ button and select a track.**
   The step and the selected track flash on the display.

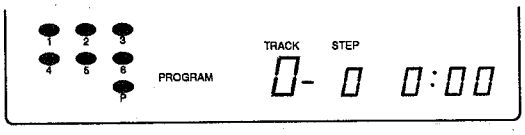


- Select a track while the AL indicator is flashing on the display.

5. **Press the MEMORY button on the CD Automatic Changer. The step and the selected track will light on the display.**
   The CD Automatic Changer will wait for selection of the next track.

6. **Select a track by repeating steps 3 to 5.**

- You can program up to 32 tracks.
- Perform steps 3 to 5 while the display is flashing. If the display stops flashing and lights as follows, perform step 3 and subsequent steps again.



7. **Press the PLAY/PAUSE button on the CD Automatic Changer.**
   Playback begins with the first track in the program.

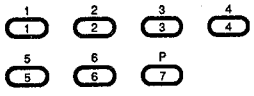
Operate the Remote Controller

You can also program tracks using the Remote Controller.

1. **Press the STOP/CANCEL button on the CD Automatic Changer.**
   This puts the CD Automatic Changer in STOP mode.
2. **Press the PLAY MODE button on the Remote Controller and select the PROGRAM mode.**
   The PROGRAM indicator lights.

3. **Press the DISC button on the Remote Controller.**

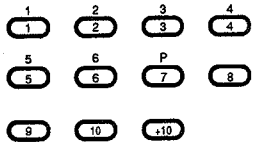
4. **Select Disc No. with numeric keys.**
   The AL indicator will flash on the display.



- The AL indicator shows that all the tracks on the selected disc have been selected. If you press the MEMORY button while the AL indicator is flashing, all the tracks on the disc are programmed.

5. **Press the CD 10KEY button on the Remote Controller.**

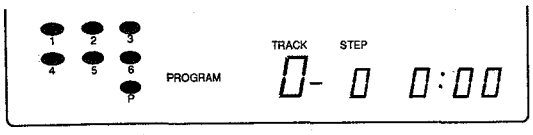
6. **Select a track with numeric keys.**
   The step and the selected track will flash on the display.



- Select a track while the AL indicator is flashing on the display.

7. **Press the MEMORY button on the Remote Controller.**
   The step and the selected track light on the display. The Remote Controller waits for selection of the next track.

8. **Select a track by repeating steps 3 to 7.**
- You can program up to 32 tracks.
- Perform steps 3 to 7 while the display is flashing. If the display stops flashing and lights as follows, perform step 3 and subsequent steps again.



9. **Press the CD CONTROL button on the Remote Controller.**
Playback begins with the first track in the program.

Checking the Program

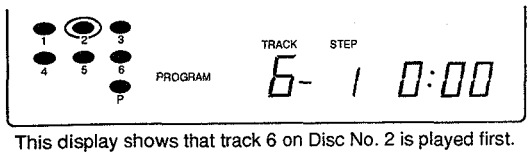
You can check the programmed sequence of playback to determine which tracks will be played in which order.

Note:
- The program contents cannot be displayed during playback. Press the STOP/CANCEL button if the CD Automatic Changer is in play mode.

1. **Press the CALL button once on the CD Automatic Changer.**

The first track in the program are displayed, along with its sequence number.

For example:



This display shows that track 6 on Disc No. 2 is played first.

2. **Press the CALL button repeatedly.**
The rest of the tracks in the program are displayed, along with their sequence numbers.

Listening to Programmed Tracks Repeatedly

1. **Press the REPEAT button to listen to the programmed sequence of playback repeatedly.**

2. **Then press the PLAY/PAUSE button.**

Updating the Program

Adding Tracks to the Program

- You cannot add any track to the program while playing. If the CD Automatic Changer is playing, press the STOP/CANCEL button.

Perform steps 3 to 5 in the section Operate the CD Automatic Changer". If you use the Remote Controller, add tracks by performing steps 3 to 7 in the section "Operate the Remote Controller".

Program modification

- You cannot modify the program while playing. If the CD Automatic Changer is playing, press the STOP/CANCEL button.

1. **Hold down the CALL button until the track or step to be modified appears.**

Select them while the step is flashing on the display.
The track and step appear on the display, and the step flashes.

2. **Select the Disc. No. and track.**
The track and step appear on the display, and the step flashes.

- If the display stops flashing and lights, perform step 1 and subsequent steps again.

3. **Press the MEMORY button.**

Deleting Tracks from the Program

- The program contents cannot be deleted during playback. Press the STOP/CANCEL button if the CD Automatic Changer is in play mode.

1. **Press the CALL button.**
Press the CALL button until the track or step to be deleted appears on the display.

2. **Press the STOP/CANCEL button on the CD Automatic Changer or CANCEL button on the Remote Controller.**
The track being displayed wil be deleted.

To delete all programmed steps:
- Set the CD Automatic Changer to the Stop mode, press the STOP/CANCEL button or the CANCEL button on the Remote Controller, and delete all programmed steps.
- Switch the power off.
- The program remains in memory until you switch the power off. To program new tracks, first turn the power off the delete the whole program.

To cancel the PROGRAM mode:
- Set the CD Automatic Changer to the Stop mode, press the PLAY MODE button, and select another mode.

Random Play

In RANDOM mode, the CD Automatic Changer selects and plays tracks at random, from among the 7 discs in the magazine and the SINGLE PLAY TRAY.
- Selections can be made so that each track would be played only once.

1. **Press the PLAY MODE button and select the random mode.**
The RANDOM indicator lights.

2. **Press the PLAY/PAUSE button on the CD Automatic Changer or *CD CONTROL button on the Remote Controller.***
CD Automatic Changer starts playing tracks at random.

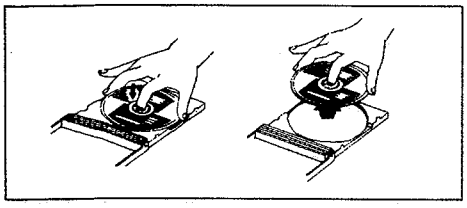
- If you set the CD Automatic Changer to the REPEAT mode by pressing the REPEAT button, even after all tracks have been played once, the CD Automatic Changer will again select and play at random to continue the random playback.

3. **To cancel random playback, press the STOP/CANCEL button.**

To cancel the RANDOM mode:
- Set the CD Automatic Changer to the Stop mode, press the PLAY MODE button, and select another mode.

Handling Compact Discs & The Magazine

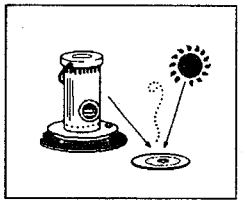
How to handle CDs



When handling compact discs, do not touch the surface of the disc (reflective silver side-the side without the label).

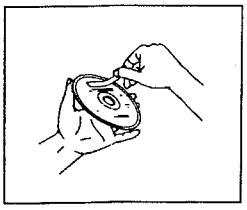
Since compact discs are made of plastic, they are easily damaged. If the disc gets dirty, dusty, scratched or warped, the sound will not be picked up correctly and, in addition, such discs may cause the CD Player-changer to malfunction.

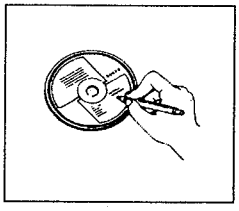
Storage



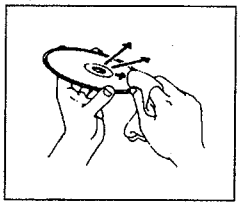
Make sure than the discs are kept in their cases. If the discs are piled, one on top of another, without their protective cases, they can be damaged. Do not put discs in any location where they can be exposed to direct sunlight- or in any place where the humidity or the temperature are high. Avoid leaving discs in your car!

Maintenance of Discs





- Do not damage the label side, or stick paper to, or use any adhesive on this surface.



- When there are fingerprints or other dirt adhering to a disc, wipe the disc with a soft, dry cloth, with a movement going from the inside, outwards.
- If it is difficult to clean, wipe the disc with a cloth moistened with water.
- Never use record cleaners. petrol, alcohol or any anti-static agents.

Recommendations on handling the magazine

1. Always keep the magazine loaded with its six disc trays.
2. When removing or inserting the disc trays, the magazine should be held horizontal.
3. Only load the magazine with compact discs already located on disc tray. Never load a disc directly into the magazine without a disc tray.
4. Do not expose it to high temperatures or to direct sunlight.
5. Do not dismantle the magazine.
6. Take care not to drop or bang the magazine.
   Do not apply any high loadings to the disc trays, particularly when removed from the magazine.
7. Never apply such solvents as petrol or thinner, nor insecticide to the surfaces of the magazine or the disc trays. Such solvents may damage their surfaces.
8. If you wish to use 8 cm (3") CD please obtain the special magazine (XC-M73), designed for these.

Only use compact-discs bearing the mark shown below:

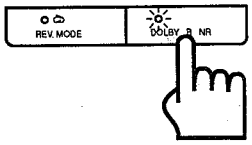
COMPACT
disc
DIGITAL AUDIO

Using the Tape Deck

The tape deck has an Auto Tape Select feature, which can tell the difference between various types of cassette tape. It can distinguish between Normal (Type I), CrO_2 - High Position (Type II), and Metal (Type IV).

Playing a Tape

1. **Press the EJECT button to open the cassette holder.**
2. **Insert a cassette and shut the cassette holder.**
3. **If the tape was recorded with Dolby B noise reduction, press the DOLBY B NR switch.**
   The indicator light will go on.

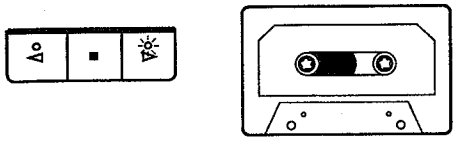


- Dolby noise reduction manufactured under license from Dolby Laboratories Licensing Corporation.
  "DOLBY" and the double-D symbol ⊡⊡ are trademarks of Dolby Laboratories Licensing Corporation.

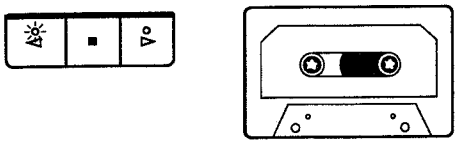
4. **Start playback by either of the following methods: (Deck B only)**

- Press the ◁ or ▷ button.

Press the ▷ button if the tape is wound mostly on the left side.



Press the ◁ button if the tape is wound mostly on the right side.



- Select TAPE with the SOURCE SELECTOR button on the amplifier.

Note:
- When cassettes are in both decks A and B, deck B starts first.

Stopping Playback and Ejecting the Tape

1. **Press the STOP button on the tape deck.**

2. **Press the EJECT button to open and remove the tape from the cassette holder.**
3. **Shut the cassette holder.**

Note:
- If the system is turned off while a tape is playing, you may not be able to eject the tape. You will need to turn the system back on and press the EJECT button to open the cassette holder.

Stopping and Restarting Playback

1. **Press the PAUSE button on the tape deck.**

Playback of the tape in deck B stops temporarily.

Note:
- The PAUSE button only applies to deck B.

2. **Press the ◁ or ▷ button.**
   The restarts playback of the tape in deck B.

Changing the Playback Direction (Deck B only)

1. **To change the playback direction during playback, press the ◁ or ▷ button.**
   The other side of the tape will now play.
2. **To change the playback direction without starting playback, press the ◁ or ▷ button while also pressing the stop ■ button.**

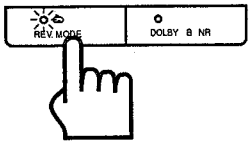
Fast-Winding the Tape

Press the ◀◀ or ▶▶ buttons on the Tape Deck to advance the tape rapidly in the direction of the arrows.

REV. mode selection

Press the REV. MODE button and select the replay mode.

If the REV. MODE button indicator is off, the non-reverse mode is effective. If you press the REV. MODE button and turn the indicator on, the auto reverse mode will become effective.



Non Reverse mode
The tape on deck A and the tape on deck B are played continuously and repeatedly in the direction of the arrow (▷).
When playing of the tape on deck A ends, then that of the tape on deck B will start automatically. When playing of the tape on deck B begins, the tape on deck A will be automatically rewound.
When playing of the tape on deck B ends, playing of the tape on deck A will begin automatically. When playing of the tape on deck A begins, the tape on deck B will be automatically rewound.

Reverse mode
One side of the tape on deck A and the both sides of the tape on deck B are played continuously and repeatedly.
When playing of the tape on deck A ends, playing of the tape on deck B will begin automatically. When playing of one side of the tape on deck B ends, the other side of the tape on deck B will be automatically played. When playing of the both sides of the tape on deck B ends, playing of the tape on deck A begins automatically. The tape on deck A is rewound automatically when deck B starts playing.

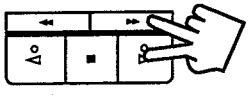
1. **Insert cassettes into decks A and B.**
2. **Press the REV. MODE button and select the REV. mode.**
3. **Press the ▷ button on deck A or the ◁ or ▷ button on deck B.**

- When you select TAPE with the SOURCE SELECTOR on the amplifier, deck B starts first.

Music Scanning

The music scan function will detect the blank segments between tracks. The blank should be about 4 seconds long for the music scan to be effective.

You can locate the beginning of the current track or next track quickly by pressing the playback button and the fast-winding button simultaneously.



Searching for Beginning of the Current Track

- If the tape is traveling in the forward direction, press the ◀◀ fast-winding button while simultaneously pressing the ▷ playback button.
- If the tape is traveling in the reverse direction, press the ▶▶ fast-winding button while simultaneously pressing the ◁ playback button. (deck B only)

Searching for Beginning of the Next Track

- If the tape is traveling in the forward direction, press the ▶▶ fast-winding button while simultaneously pressing the ▷ playback button.
- If the tape is traveling in the reverse direction, press the ◀◀ fast-winding button while simultaneously pressing the ◁ playback button. (deck B only)

Note:
- The deck that is playing will stop if the music scan function is used on the other deck.

The music scan function is not effective:
- When the track being scanned contains an area of low sound level.
- When the blank between tracks is short.
- When there is noise, for example, a hum between tracks.

Recording a Tape

Recording Notes

- Deck A is used for playback only, and deck B is used for both recording and playback.
- To reduce hiss, use the Dolby B noise reduction system. Press the DOLBY B NR button. The indicator light will go on.
- To record on both sides A and B continuously, select auto reverse mode by pressing the REV. MODE button.
- The recording level is set automatically.
- If the small tabs on cassette tapes which prevent accidental erasure have been removed, the contents of the tape cannot be over-recorded or erased. To record or erase, cover the holes with adhesive tape. The tab in the upper left corner controls the side facing you; and the other tab controls the opposite side.
- If you are recording an AM (MW/LW) broadcast and you hear interference, move the BEAT CUT switch on the rear panel of the cassette deck & amplifier unit from Position 1 (the normal mode) to Position 2.

Recording from Various Sources

1. **Insert a cassette for recording into deck B.**
2. **Select the source you are recording from.**
3. **Press the Pause ⏸ button on the tape deck while simultaneously pressing the REC/REC MUTE button.**
   This puts the deck B in REC/PAUSE mode.

- To record sound that has been adjusted by the SEA, make the SEA indicator light, then select an SEA effect.

Note:
- When LEARNING CSRP in ON, do not change the volume level during recording because the loudness feature will cause the SEA settings to be altered.

4. **Start the source to be recorded.**
5. **Press the Play ◁ or ▷ button on the deck B to start recording.**
   To record on both sides of tape, start recording in the forward (▷) direction.
6. **To stop recording, press the Stop ■ button.**
7. **To stop recording temporarily, press the Pause button on deck B.**
   To restart recording again, press the Play button ◁ or ▷.

Dubbing a Tape

Normal-speed Dubbing

1. **Insert the cassette for playback into deck A and the cassette for recording into deck B.**

- The type of tape (Normal, CrO_2, or Metal) used for recording must be the same as that used for playback.
- With the Dolby system on, tapes are recorded in the same Dolby mode as the pre-recorded tape, regardless of whether the DOLBY B NR button is ON or OFF (the DOLBY B NR indicator remains off while dubbing is in progress.)
- You cannot dubbing using SEA-adjusted sound.

2. **Press the Pause ⏸ button while simultaneously pressing the REC/REC MUTE button on deck B.**
   This places deck B in REC/PAUSE mode.
3. **Press the Play button ▷ on deck A.**
4. **Press the Play button ◁ or ▷ (depending on which side of the tape you want to record onto) on deck B.**
   The tape-to-tape recording starts.

Note:
- You cannot listen to another source during normal-speed dubbing.

- To stop normal-speed dubbing before end of either the playback or record tape, press the Stop ■ buttons on decks A and B.

High-Speed Dubbing

1. **Insert the cassette for playback into deck A and the cassette for recording into deck B.**
2. **Press the HIGH SPEED DUBBING button on the Tape Deck.**
   The high-speed tape-to tape recording starts.

Note:
- *You can listen to another source while high-speed dubbing is in* progress.

- To stop high-speed dubbing before reaching the end of either playback or record tape, press the Stop ■ button on deck B.

- If nearby television is on during high-speed dubbing, beeping noise may be recorded onto the record tape. So turn off the television or move it farther away.

3. **Press the Stop ■ button on deck A when you hear the end of a track to record from many different tapes (for example, to create a "Greatest Hits" tape).**

   Deck A stops playback, and deck B automatically creates about a 4 second blank, then pauses.

Note:
- If you don't want this blank, press the Pause ⏸ button on deck B before pressing the Stop ■ button.

4. **Put another tape in to deck A.**
5. **Press the HIGH SPEED DUBBING button on the Tape Deck.**
   The high-speed dubbing restarts.
6. **To record tracks from other tapes, repeat steps 3-5.**

Note:
- ***It should be noted that it may be unlawful to re-record prerecorded tapes, records, or discs without the consent of the owner of copyright in the sound recording and in any copyright musical or literary work embodied in that recording.***

Erasing a Tape

1. **Insert the tape to be erased into deck B.**

- When you want to erase both sides, press the REV. MODE button so the indicator lights.

2. **Press the Pause II button while simultaneously pressing the REC/REC MUTE button.**
   This puts the deck in REC/PAUSE mode.

3. **Press the SOURCE SELECTOR button on the amplifier to select the TAPE.**

4. **Press the ◁ or ▷ button (depending on which side of the tape you want to erase) on deck B.**
   The erasure of the tape begins.

Direct Recording from the CD Automatic Changer

Direct recording permits a tape deck to start recording automatically in synchronism with a CD Automatic Changer.

1. **Insert the cassette for recording into deck B.**
- If you with to record on both sides of the cassette, press the REV. MODE button so the indicator lights.

2. **Place the CD on the single play tray.**

3. **Press the CD DIRECT REC button on the Tape Deck.**

- The CD Automatic Changer and the Tape Deck are activated, and recording begins with the first track of the CD.
- To stop direct recording, press the Stop ■ button on deck B or the STOP/CANCEL button on the CD Automatic Changer.

Note:
- If you press the Disc button, ⏮ +10 TIME or ⏭ +1 TIME button during recording, the track to be recorded is changed.

Recording CD Tracks in Auto-Edit Mode

In Auto-Edit mode, tracks fro the CD will automatically be selected to determine which tracks should go on side A of the tape and which should go on side B.

The selection is based on the lengths of the tracks and the length of the tape.
This ensures a proper "fit" of the tracks recorded on the tape. It prevents a track from being cut off when the end of the tape is reached.

1. **Insert the cassette for recording in deck B.**
- When you want to record both sides of a cassette, select auto reverse mode by pressing the REV. MODE button so the indicator lights.

2. **Set the CD and magazine.**

3. **Press the STOP/CANCEL button on the CD Automatic Changer.**

4. **Press the EDIT button on the CD Automatic Changer and select the Auto Edit mode.**
   The A. EDIT indicator lights.

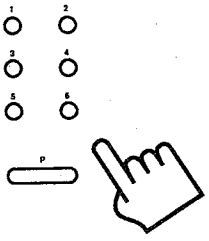
5. **Enter the length of the tape to be recorded using the ⏮ +10 TIME and ⏭ +1 TIME buttons.**

For example: To set a period of 46 minutes, press the ⏮ +10 TIME button four times and press the ⏭ +1 TIME button six times.

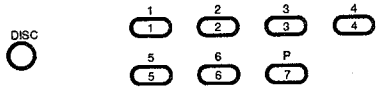
6. **Press the SIDE A/B button.**

- The CD Automatic Changer calculates which tracks should be placed on side A and which should be placed on side B.

7. **Press the Disc button and specify the Disc No. of the disc to be recorded.**



- If you use the Remote Controller, press the DISC button and then specify one of 1 to P with a numeric key.



- To change the disc, specify the Disc No. of another disc again.
- To start recording the tracks on the selected CD with a track other the first, press the ⏮ +10 TIME or ⏭ +1 TIME button on the CD Automatic Changer or press the ◀◀ ⏮ or ⏭ ▶▶ button on the Remote Controller to specify the track with which recording is to start.

8. **Press the MEMORY button on the CD Automatic Changer or Remote Controller.**
   The Auto Edit program is created automatically.

- The last track to be recorded, the number of steps, and the remaining time of side B of the set tape are shown on the display.
  When you press the SIDE A/B button again, the last track of side A of the set tape to be recorded, the number of steps, and the remaining time of the tape are shown on the display.
- To check the Auto Edit contents, press the CALL button. Each time you press the button, the track and step of the displayed side will show on the display.

Note:
- Up to 16 tracks can be allocated for each side of the cassette.

9. **Press the CD DIRECT REC button on the Tape Deck.**

- The tape is automatically rewound to the beginning of side A, and then recording begins.
- When the Tape Deck is set in the auto reverse mode, after the last track is recorded on side A, the tape deck high-speed-erases to the end of side A. Then it changes direction to side B and begins recording the remaining tracks.
- To stop recording, press the Stop ■ button on deck B, or press the STOP/CANCEL button on the CD Automatic Changer.

Note:
- **During recording in the Auto-Edit Mode, do not operate the CD Automatic Changer.**

To cancel the Auto-Edit mode, press the STOP/CANCEL button on the CD Automatic Changer, then press the PLAY MODE button.

Recording CD Tracks in Programmed-Edit Mode

You can make your favorite selections from 7 CD and record them on cassette.

1. **Insert the cassette for recording in deck B.**
- When you want to record both sides of a cassette, select auto reverse mode by pressing the REV. MODE button so the indicator lights.

2. **Set the CD and magazine.**

3. **Press the STOP/CANCEL button on the CD Automatic Changer.**

4. **Press the EDIT button on the CD Automatic Changer and select the Programmed Edit mode.**
The P. EDIT indicator lights.

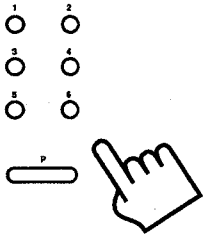
5. **Enter the length of the tape to be recorded using the +10TIME and +1TIME buttons.**

For example: To set a period of 46 minutes, press the +10TIME button four times and press the +1TIME button six times.

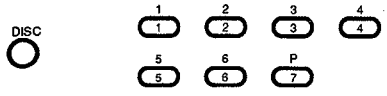
6. **Press the SIDE A/B button.**

- This tells the system that you will be choosing tracks to be recorded on side A of the tape.
- The length of time for one side of the tape is displayed. This is half of the total tape length. The total time for the tracks you choose for each side cannot exceed this time.
- If you do not press the SIDE A/B button, side A is automatically selected.

7. **Press the Disc button and specify the Disc No. of the disc containing the track to be recorded.**

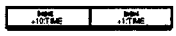


- If you use the Remote Controller, press the DISC button and then specify one of 1 to P with a numeric key.

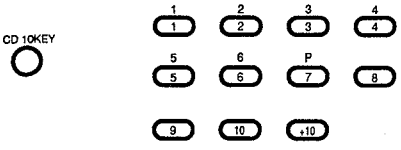


- To change the disc, specify the Disc No. of another disc again.

8. **Press the +10TIME or +1TIME button and select the track to be recorded.**



- If you use the Remote Controller, press the CD 10KEY button, then specify a track with a numeric key.



9. **Press the MEMORY button on the CD Automatic Changer or Remote Controller.**

- Up to 16 tracks can be allocated for each side of the cassette.
- If the length of a track exceeds the remaining tape length, the time indication blinks on the display. Choose a different track number.
- To delete a track from the program, press the CALL button to display the track to be deleted. Press the STOP/CANCEL button on the CD Automatic Changer or the CANCEL button on the Remote Controller.

10. **If you also want to record on the other side of the tape, press the SIDE A/B button and repeat steps 7-9.**

- To check the Programmed Edit contents, press the CALL button. Each time you press the button, the track and step of the displayed side are shown on the display.
To modify a track in the program, press the CALL button, and call the track to be modified. Select a new Disc No. and track, then press the MEMORY button.

11. **Press the CD DIRECT REC button on the Tape Deck.**

- The tape is automatically rewound to the beginning of side A, and then recording begins.
- When the Tape Deck is set in the auto reverse mode, after the last track is recorded on side A, the tape deck high-speed-erases to the end of side A. Then it changes direction to side B and begins recording the remaining tracks.
- To stop recording, press the Stop ■ button on deck B, or press the STOP/CANCEL button on the CD Automatic Changer.

To cancel the Programmed-Edit mode, press the STOP/CANCEL button on the CD Automatic Changer, then press the PLAY MODE button.

Note:
- The program cannot be edited during recording. To modify the program, cancel the Programmed-Edit mode, and perform step 4 and subsequent steps.

Note:
- During recording the Programmed-Edit mode, do not operate the CD Automatic Changer.

Creating a Blank During Recording

Use the Record Muting function when you do not want to record a section of the source.

1. **Press the REC/REC MUTE button on the Tape Deck at the beginning of the section you don't want to record.**

A blank of about 4 seconds is created on the cassette, and then the deck pauses.

2. **To start recording again, press the ◁ or ▷ button.**

- To create a blank of more than 4 seconds, hold down the REC.REC MUTE button. When you release this button, the deck pauses.
- When the source you are recording from is the CD Automatic Changer and the CD DIRECT REC button is used, the REC/ REC MUTE button will not function.
- The Remote Controller REC button dose not have the REC MUTE function.

Recording with the Timer

The Tape Deck can be set up to record a tape automatically. This is especially useful for recording broadcasts when you are not around, or late at night when you are asleep.

1. **Insert a cassette for recording in to deck B.**
2. **Set the timer, by following the steps in "Setting the Timers".**
3. **Select one of the following sources:**

TUNER TIMER REC	Records TUNER preset stations
- - TIMER REC	Records from the source selected before turning off the system.

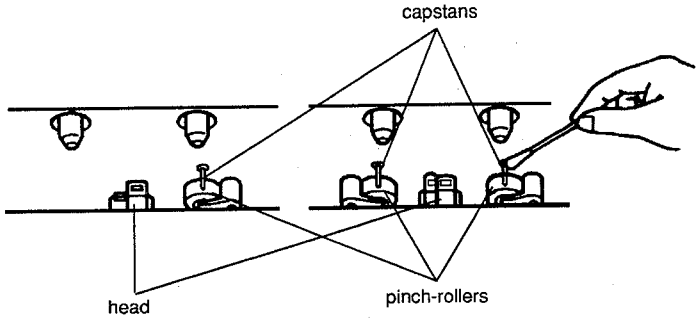
Care and Handling

You must handle your cassette tapes, and tape deck carefully to preserve the full length of their life-times.

- If a tape is loose in its cassette, take up the slack by inserting a pencil in one of the reels and rotating it.
  If a tape is loose, it may get stretched, cut, or caught in the cassette.
- Do not touch the tape surface.
- Do not store the tape:
  — In dusty places
  — In direct sunlight or heat
  — In moist areas
  — On a TV or speaker
  — Near a magnet
- The use of C-120 or thinner tape is not recommended.

Tape Deck

- If the head, capstans, or pinch-rollers of the tape deck become dirty, the following may occur:
  — Impaired sound quality
  — Discontinuous sound
  — Fading
  — Incomplete erasure
  — Impossible to record
- Clean the head, capstans and pinch-rollers with a cotton swab moistened with alcohol.



Using the Tuner

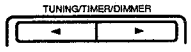
Listening the Broadcasts

The tuner can receive FM and AM broadcasts. Stations can be tuned in manually, automatically, or from preset memory storage.

Manual Tuning

1. **Select the broadcast band you want to tune in by pressing the FM of AM button on the Tuner.**

2. **Press the TUNING/TIMER/DIMMER button (◄ or ►) to tune in a station.**



3. **Hold down the TUNING/TIMER/DIMMER button to change the frequency rapidly, then tap the button to set the frequency precisely.**

Automatic Tuning

1. **Select the broadcast band you want to tune in by pressing the FM or AM button on the Tuner.**
2. **Hold down the TUNING/TIMER/DIMMER button (◄ or ►) for a moment, and then release the button.**

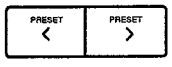
- When a station is tuned in, the TUNED indicator lights up.

Note:
- The Tuner will tune in the nearest strong station.

Presetting Stations in Memory

You can store up to 40 of your favorite radio stations (FM and AM) in memory, giving you quick, easy access to the stations.

1. **Select a band by pressing either the FM or AM button on the Tuner.**
2. **Press the TUNING/TIMER/DIMMER button (◄ or ►) to tune in a station.**
3. **Press the MEMORY button on the Tuner.**
   The "MEMORY" indicator on the Tuner display blinks for 5 seconds.
4. **Press the PRESET button (< or >) on the Tuner to assign a number (1-40) to the station, or enter a number (1-40) with the Remote Controller's numeric keypad.**



Example:
To enter 7, press "7".
To enter 17, press "+10", then "7".
To enter 20, press "+10", then "10"

- Before using the numeric keypad, press either the FM or AM button. This will allow you to use the numeric keypad in the Tuner mode.
- If the "MEMORY" indicator has stopped blinking, press the MEMORY button again and repeat step 4.
- If the preset number you chose already has a station assigned to it, the old station will be replaced by the new one.

5. **Press the MEMORY button again.**
   This stores that station in memory, with the preset number (1-40) you chose in step 4.
6. **Repeat steps 1-5 for each station you want to store in memory with a preset number.**

Caution! If the system is unplugged or if a power failure occurs, the preset stations stored in memory may be lost.

Cancelling Preset Stations

1. **Press the CANCEL button on the Tuner.**
   The "CANCEL" light on the Tuner display blinks for 5 seconds.

2. **Press the PRESET button (< or >) on the Tuner to select the preset station you want to cancel.**
   If the "CANCEL" light has stopped blinking, press the CANCEL button again and repeat step 2.
3. **Press the Cancel button again.**
   The preset station will be cancelled.

Tuning in Preset Stations

- Press the PRESET button (< or >) on the Tuner to select the preset station you want. The preset station numbers are displayed sequentially each time you press the PRESET button.
- You can also select a station by entering its preset number on the Remote Controller's numeric keypad.
- Before using the numeric keypad, press either the FM or AM button. This will allow you to use the numeric keypad in the Tuner mode.

FM Reception Modes

There are two FM reception modes: AUTO and MONO.

AUTO: Stations are tuned in with either STEREO or MONO, depending on the FM signal.
MONO: Stations are tuned in with MONO only. This will reduce interference noise of weak stations and make the reception sound better.

1. **Press the FM MODE/ MUTE button on the Tuner to switch between the AUTO and MONO reception modes.**

2. **Press the FM MODE/MUTE button on the Tuner to the AUTO mode to receive the station in stereo.**

- If a stereo broadcast is received when the FM band is selected, the "STEREO" light will be displayed on the Tuner.
- If the FM Reception Mode is MONO, the "STEREO" light will not be displayed.

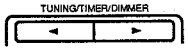
Using the Timers

Setting the Clock

The clock will be displayed even when the system is turned off. Pressing the TUNING/TIMER/DIMMER button (◄ or ►) will switch between two brightness levels for the clock.

1. **Press the CLOCK ADJUST button on the Tuner.**
   The hours digits blink.

2. **Press the TUNING/TIMER/DIMMER button (◄ or ►) to set the hours digit.**



- Press the ► button to increase the hour, and press the ◄ button to decrease the hours.
- To enter a new hour digit, press the CANCEL button and repeat step 2.

3. **Press the MEMORY button on the Tuner.**

This sets the hour portion of the time.

The minutes digits will blink.

4. **Press the TUNING/TIMER/DIMMER button (◄ or ►) to set the minutes digit.**

- It's a good idea to set the minutes digits one minute ahead. Then you can start the clock when it reaches the set time exactly (according to the correct time form the TV, radio, or telephone).
- To enter a new minute digit, press the CANCEL button and repeat step 4.

5. **Press the MEMORY button.**
   The clock starts as soon as you press the MEMORY button.

Caution! If there is a power failure, or if you unplug the stereo, the clock time will be lost. Repeat steps 1-5 when power is restored.

- Using the TUNING/TIMER/DIMMER button to change luminosity of time display by two steps under STANDBY status.
  ► : Increases luminosity
  ◄ : Decreases luminosity

Setting the Timers

With the timers you can make tape recordings of broadcasts, CD's, or tapes when you're not around. You can also play these music sources at specified times without recording them

- Use TIMER 1 and TIMER 2 record a radio broadcast when you're not home, or late at night when you're asleep.
- Use the DAILY timer to record a broadcast that occurs at the same time every day.
- The procedure for setting TIMER 1, TIMER 2 and the DAILY timer is the same. You need to tell the system:
  — The name of the timer (TIMER 1 , TIMER 2, or DAILY).
  — The time the timer should turn the system on.
  — The time the timer should turn the system off.
  — The source the timer should turn on (Tuner, CD, or Tape).
  — The volume level that should be used during recording or playback.

Note:
- The clock must be set to the correct time for the timers to be effective.

Caution! Do not operate the remote controller when you are programming the timer.

Choosing a Timer

Press the TIMER 1, TIMER 2, or DAILY button on the Tuner to select a timer. This puts the system in the Timer Setting mode. The information that the system expects next will blink on the display.

Setting the Start Time

1. **Press the TUNING/TIMER/DIMMER buttons to set the hour that the system will turn on.**

   The ◄ button makes the hour number decrease, and the ► button makes the hour number increase.

2. **Press the MEMORY button.**
   This stores the hour portion of the start-time in memory.

3. **Press the TUNING/TIMER/DIMMER buttons to set the minute.**

4. **Press the MEMORY button.**
   This stores the minute portion of the start-timer in memory.

Setting the Stop Time

1. **Press the TUNING/TIMER/DIMMER buttons to set the hour that the system will turn off.**

2. **Press the MEMORY button.**
   This stores the hour portion of the stop-time in memory.

3. **Press the TUNING/TIMER/DIMMER buttons to set the minute.**

4. **Press the MEMORY button.**
   This stores the minute portion of the stop time in memory.

Selecting the Source

1. **Press the TUNING/TIMER/DIMMER button to select a source.**

   Repeatedly pressing the ► button displays the sources in the following order:

Display	What it meats
– – – – – – – – –	Plays from whichever source was used just before turning off the system
TUNER	Plays FM or AM broadcast
TUNER TIMER REC	Records FM or AM broadcast
CD	Plays a CD
TAPE	Plays a tape
– – – – TIMER REC	Records from whichever source was used just before turning off the system

Note:
- If you choose an FM or AM radio station as the source, select the preset station by pressing the PRESET button on the Tuner.

2. **Press the MEMORY button.**
   This stores the source to play or record in memory.

Setting the Volume

1. **Press the TUNING/TIMER/DIMMER button to select a volume level.**
   Repeatedly pressing the ► button displays the volume levels in the following order.:

Display	What it means
VOL – – –	Volume set to the level used before shut the power off.
VOL – – 0	Volume off
VOL – – A	Volume barely on
VOL – – B	Volume at about a 1/4 turn of the volume knob
VOL – – C	Volume at about a 1/3 turn of the volume knob

2. **Press the MEMORY button.**
   This stores the volume level for timed playback or recording in memory. To change your selection, press the CANCEL button and enter a new value.

Starting the Timer

Press the Timer button to start the timer. The timer you chose should light on the display.

Note:
- If the timer light does not light, the timer was not set properly, and you need to set the start time again.

To change your selection, press the CANCEL button and enter a new value.

Turning the System Off

Press the POWER button on the amplifier to turn the system off.

- The system is now programmed to turn on at the preset start-time, and play or record until the stop-time.
- It will record or play the preset source at the preset volume level until the top-time is reached.
- If you turn the system on before the start-time, the timer will still operate as programmed at the start-time.

Resetting the Timers

To reset a timer, press the button (TIMER 1, TIMER 2, or DAILY) on the Tuner twice. Now the timer is set again and will use the same start-time, stop-time, source, and volume level as before.

Setting the Wake-Up and Sleep Timer

You can set a timer so it turns on to wake you up or turns off when you go to sleep.

Setting the Wake-Up Timer

The wake-up timer serves as an alarm clock. It turns the system on after a programmed time lapse and plays the source that was used before the system was turned off. You can set a wake-up time from between 5 minutes and 12 hours.

1. **Press the POWER switch on the amplifier so it is off.**

2. **Press the WAKE UP/SLEEP button on the Tuner.**
   This tells the system that you are going to set the wake-up time.

3. **Press the WAKE UP/SLEEP button repeatedly until the desired wake-up time appears.**

- Each time you press the WAKE UP/SLEEP button, the wake-up time lapse changes in the following order:

  →0:05→0:10→0:15→0:30→0:45→1:00→1:30→2:00→3:00→(every hour)→12:00→ (back to the beginning)

- If you make a mistake, press the CANCEL button on the Tuner and enter a new wake-up time with the WAKE UP/SLEEP button.

The system will now turn on after this time lapse.

- The wake-up timer has priority over TIMER 1, TIMER 2, and the DAILY timer.
  This means that if the start-time for one of the timers occurs before the wake-up time, the system will wait until the wake-up time to turn on.

Note:
- If CD is the source that will be used, playback begins with the first track.

Setting the Sleep Timer

The sleep timer is used to turn off the system after a specified time lapse. With this timer you can fall asleep listening to music, knowing that the system will shut off automatically and not stay on all night. You can set the sleep timer to turn the system off from between 5 minutes and 2 hours.

1. **Press the POWER switch on the Amplifier so it is on.**

2. **Start the source you want to listen to.**

3. **Press the WAKE UP/SLEEP button on the Tuner.**

   This tells the system that you are going to set the sleep time.

4. **Press the WAKE UP/SLEEP button repeatedly until the desired sleep time appears.**

   Each time you press the WAKE UP/SLEEP button, the sleep time lapse changes in the following order:

   →0:05→0:10→0:15→0:30→0:45→1:00→1:15→1:30→1:45→2:00→ (back to the beginning)

- If you make a mistake, press the CANCEL button on the Tuner and enter a new sleep time with the WAKE UP/SLEEP button.

The system will now turn off after this time lapse.

- The sleep timer has priority over TIMER 1, TIMER 2 and the DAILY timer.

This means that if the stop-time for one of the timers occurs before the sleep time, the system will wait until the sleep time before turning itself off.

Checking the Remaining Time

After setting the wake-up or sleep timer, you can check the time remaining until the system turns on (wake-up time) or shuts off (sleep time).

Press the WAKE UP/SLEEP button.

The remaining time is displayed for 5 seconds. Then the clock time appears again.

Adding More Time

If you want more time before the wake-up timer turns the system on (or the sleep timer turns the system off), follow these steps:

1. **Press the WAKE UP/SLEEP button.**
   The remaining time is displayed for 5 seconds. Then the clock time appears again.

2. **Press the WAKE UP/SLEEP button again before the clock time is displayed.**

- Keep pressing this button until the desired additional time is reached.

Now the system will wait until the added amount of time until turning on or shutting off.

Cancelling the Time Setting

If you decide you don't want the system to wake you up or play music while you fall asleep, you can turn these timers off.

1. **To cancel the wake-up timer, press the POWER button on the Amplifier.**
   This turns the power on.

2. **To cancel the sleep timer, press the POWER button on the Amplifier.**
   This turns the power off.

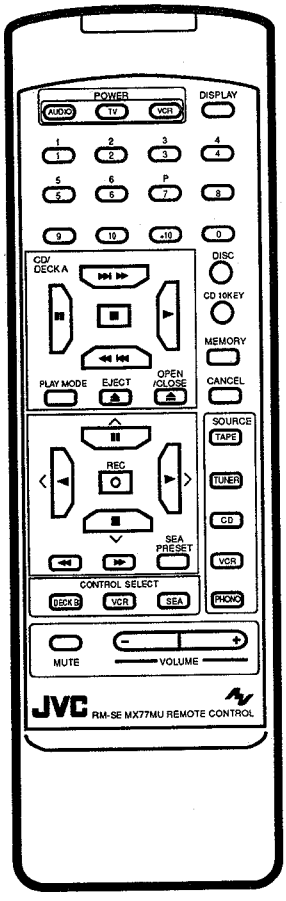
Using the Remote Controller

Operating the Remote Controller

You can use the Remote Controller to operate the system without leaving your chair. You can use it up to a distance of 23 feet.

Point the Remote Controller at the remote sensor on the Amplifier.

Note:
- When the Tuner is selected as the source, and Cd OFF is displayed, only the OPEN/CLOSE and PLAY button on the Remote Controller can be used. To use other buttons on the Remote Controller (for programming and other operations), select CD with the SOURCE SELECTOR, or press the CD PLAY button on the Remote Controller first.



POWER

Turn on the main unit	AUDIO
Turn on the TV	TV
Turn on the VCR	VCR

Note:
- Use only a TV and VCR made by JVC.
  If your VCR has the remote control code A/B switch, set the switch to the A position.

Amplifier

Adjust volume level	− +
Gradually reduce the volume to zero (If you press it again, the volume will return to roughly what it was before.)	MUTE
Change the SEA DISPLAY	DISPLAY
Set the SOURCE SELECTOR of the amplifier to TAPE	TAPE
Set the SOURCE SELECTOR of the amplifier to TUNER	TUNER
Set the SOURCE SELECTOR of the amplifier to CD	CD
Set the SOURCE SELECTOR of the amplifier to VCR	VCR
Set the SOURCE SELECTOR of the amplifier to PHONO	PHONO
Change the PLAY MODE of the CD Automatic Changer	PLAY MODE
Select the SEA pattern	SEA PRESET
Set the Remote Controller to the SEA CONTROL mode	CONTROL SELECT: DECK B, VCR, SEA
Select the SEA frequency band, or select a preset pattern	◀ ▶
Adjust the SEA level, or select a preset pattern	▲ ▼

Note:
- Use the main unit switch to turn the SEA on or off.

CD Automatic Changer

Eject the magazine.	EJECT
Open and close the disk tray	OPEN /CLOSE
When the Remote Controller is set to CD mode, the CD is played	CD
Play a CD	▶

Stop playback of a CD

Set the numeric keys to the DISC mode

Select the Disc No.

Place numeric keys in CD mode

Select track number

Scanning through the track number

Tape Deck

When the CD/DECK A key is set to deck A mode, the cassette is played.
If both decks A and B contain a cassette, the cassette in deck B is played first.

DECK A

Play a tape

Stop playback

Fast forwarding or fast rewinding

Search for beginning of the track

DECK B

Set the Remote Controller to the DECK B mode

Play a tape in forward direction

Play a tape in reverse direction

Stop playback temporarily (deck B)

Stop playback

Fast forwarding or fast rewinding

Search for beginning of the track while in forward direction

Search for beginning of the track while in reverse direction

Recording in forward direction

Recording in reverse direction

Pausing recording

Stopping recording

Tuner

Selecting Tuner mode

Selecting a preset station

VCR

Set the Remote Controller to the VCR mode

Recording

Play a tape

Stop playback

Stop recording or playback temporarily

Rewind the tape

Fast forwarding

Select a TV channel

- When using the remote controller to operate a VCR, point the controller at the VCR.

Note:
- Where "+" is indicated, press and hold the first button illustrated, then press the second.

Troubleshooting

Sympton	Possible Cause	Action
No sound is heaard.	Speakers are connected incorrectly.	Re-connect speakers (See "Connecting the SystemComponent")
Impossible to record.	Tape tabs are broken out.	Cover tabs with adhesive tape.
Interference during broadcast.	Antenna is disconnected. The loop antenna is too close to the system.	Re-connect the antenna securely. Change the position and direction of the loop antenna.
CD Sound is discontinuous.	The CD is seratched or stained.	Clean or replace the CD.
The Remote Controller cannot be operated.	There is an obstruction blocking the remote sensor on the amplifier. The batteries of the Remote Controller are weak.	Remove the obstruction. Replace the batteries.
The magazine does not eject when the EJECT button is pressed.	The power is off. The magazine has not been inserted correctly.	Turn on the system. Pusy the magazine all the way in and try pressing the EJECT button again.
The CD disc tray cannot be operated.	Are the power cord and the system connector unplugged?	Plug the power cord and the system connector in properly.
A selection on a CD was not played.	The CD is in the tray puside down.	Put the CD in the tray with the label side facing up.
Operations are disabled.	The built-in microprocessor may malfunction due to external electrical interference.	Unplug the system, then plug it back in.
The cassette holder cannot be opened.	The system was turned off because the timer was operated while the tape was running.	Turn on the system.

Specifications

Double Cassette Amplifier

AMPLIFIER SECTION

Output Power

SPEAKERS A (Main) — **18 watts per channel, min. RMS, both channels driven into 8 ohms, from 40Hz to 20kHz with no more than 0.9% total harmonic distortion.**

SPEAKERS B (Subwoofer) — **22 watts per channel, min. RMS, both channels driven into 6 ohms, at 80 Hz, with no more than 0.9% total harmonic distortion.**

Total Harmonic Distortion at Half-Rated Power — 0.07%

Input Sensitivity/Impedance (1kHz)

- VCR/DAT — 300mV/40 k ohms
- PHONO — 3mV/47 k ohms

SEA Center Frequencies — 63, 160, 400, 1k, 2.5k, 6.3k, 16kHz

SEA Control Range — ± 12 dB ± 10 dB

CASSETTE DECK SECTION

Frequency Response

- Metal: — 30 - 17,000Hz
- CrO_2: — 30 - 16,000Hz
- Normal: — 30 - 15,000Hz

Wow and Flutter (WRMS) — 0.09%

Dimensions — 10-7/8 x 7-1/4 x 12-5/16 inches (275 x 183.5 x 321 mm)

Weight — 14.8 lbs (6.7 kg)

CD Automatic Changer/Tuner

CD AUTOMATIC CHANGER SECTION

CD capacity	7 discs
Dynamic Range	96 dB
Signal-to-Noise Ratio	102 dB
Wow and Flutter	Unmeasurable

TUNER SECTION

FM

Tuning range	87.5 MHz - 108.0 MHz
Usable Sensitivity	0.95μV/75 ohms (10.8dBf)
Signal-to-Noise Ratio (IHF-A Weight)	
MONO	80 dB
STEREO	73 dB

AM

Tuning range	530 kHz - 1,710 kHz
Dimensions	10-7/8 x 7-1/4 x 12-1/4 inches (275 x 183.5 x 311 mm)
Weight	8.9 lbs (4.0 kg)

General

Power Requirements	AC 120 V ∿ 60 Hz
Poewr Consumption	135 W, 175VA

Design and specifications subject to change without notice.

JVC
VICTOR COMPANY OF JAPAN, LIMITED

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